

WHAT IS CLAIMED IS:

1. A method for providing an immune response to a non-enteric pathogen antigen (NEPA), in an animal made immunoreceptive to the NEPA, by feeding the immunoreceptive animal with a substance comprising a physiologically acceptable plant material containing the NEPA.

2. The method of Claim 1 where the NEPA is hepatitis B surface antigen (HBsAg).

3. The method of Claim 1 wherein the animal is made immunoreceptive to the NEPA by feeding the substance to the animal in conjunction with an adjuvant that renders the animal immunoreceptive to the NEPA.

4. The method of Claim 3 where the NEPA is HBsAg.

4 5. The method of Claim 1 wherein the animal is human.

5 6. The method of Claim 4 wherein the plant material is from a plant that has been genetically altered to express said antigen.

6 7. The method of Claim ~~6~~⁵ wherein the human ingests sufficient plant material to provide from about 10 to about 100 micrograms of NEPA per kilogram of body weight of the human.

7 8. The method of Claim ~~7~~⁶ wherein the human ingests sufficient plant material to provide from about 2 to about 5 grams of plant material per kilogram of body weight of the human.

8 9. The method of Claim ~~8~~⁷ wherein the human ingests said plant material a plurality of different times, said times being separated from each other by at least 5 days.

9 10. The method of Claim ~~9~~⁸ wherein the plurality of times is three times.

10 11. The method of Claim ~~10~~⁹ wherein the plant material is a material from a plant of the family Solanaceae.

11 12. The method of Claim ~~11~~¹⁰ wherein the plant is a potato.